ABSTRACT

IMAGE PROCESSING APPARATUS

       An image processing apparatus is operable to embed data into an image.
5   Images such as those generated from an inter-laced scan may comprise a frame of
image data, the frame comprising first and second image fields. The image processing
apparatus comprises a combining processor operable to introduce the data to be
embedded into at least one of the first and second fields of the image frame. As such a
likelihood of a perceivable effect of the embedded data on the image may be reduced,
10 because the images are viewed as a frame. The embedded data may also have an
increased likelihood of being detected because some processing may effect the image
frame more then the fields of the image. The combining processor may be operable to
represent the data to be embedded in a transform domain form, and, in combination
with a transform processor, combine the data to be embedded with the first and/or
15 second fields with the image in a transform domain form or a spatial domain form.
The transform domain may provide a plurality of sub-bands and the data to be
embedded may be introduced into at least one of the sub-bands of the transform
domain form of the first and/or second fields of the image. Furthermore, the
combining processor may be operable to introduce data to be embedded into at least
20 one other sub-band, and the combining processor may be operable in combination with
the transform processor to combine the data in the other sub-band with the frame of
image data in the transform or the spatial domain.

[Fig 2]

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